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*Galois theory, a logical path from  
Grothendieck's version to the fundamental theorem*

The Grothendieck's version of Galois theory changes the focus from the adjunction between stabilizers and fixed points, the so-called fundamental theorem, to the recognition of a category as the category of actions of a group. This talk attempts to show how the fundamental theorem can be recovered. We will explain this procedure in the framework of internal covers of first-order theories. There the key point is realizing the functorial nature of substructures. Naturally, we will also explain how field extensions fit into that framework.

This work was motivated by Kamensky's proof of tannakian duality, in the neutral and symmetric case, by means of the model-theoretic statement. In a current joint work with Alain Bruguières, we seek to generalize this result to the framework of Hopf monads over monoidal closed categories. This framework is very general since it encompasses both the model theoretic statement and the tannakian duality.

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\*This work is supported by *Convocatoria 2017-2* from the *Facultad de Ciencias* at *Universidad de los Andes*.